Listing of Claims

1. (original) A plasma generator, in which a plasma forming space, into which the air is introduced, is provided, band plate-like first and second electrodes are arranged in opposed relation to each other through a dielectric in the plasma forming space, and plasma is generated by discharge caused by applying voltage between the first and second electrodes,

wherein the first and second electrodes are provided on one surface and another surface of the dielectric, respectively, and arranged in a state relatively displaced in a surface direction of the dielectric so as to satisfy the following Equation 1 to Equation 3:

(Equation 1)

$$\tan\theta_2 = \frac{L1}{d}$$

(Equation 2)

$$\tan\theta_1 = \frac{1}{\varepsilon_2} \tan\theta_2$$

(Equation 3)

$$26\times10^6[V/m] \geq \frac{\cos\theta_1 \cdot \sin2\theta_2}{d\sin2\theta_1} V=E_1(max)$$

wherein Li is a separate distance between a front end edge position of the first electrode and a corresponding end edge position of the second electrode, which is located on an outside

in a displacement direction of the electrodes from the front end edge position of the first electrode and closest to the front end edge position of the first electrode, in the surface direction of the dielectric, θ_2 is an angle formed by an imaginary plane including the front end edge of the first electrode and the end edge of the second electrode with a thickness-wise direction of the dielectric, d is a thickness [m] of the dielectric, V is the intensity [V] of voltage applied between the first and second electrodes, θ_1 is an outgoing angle of an electric field in the plasma forming space at a boundary surface of the dielectric, ε_2 is a dielectric constant of the dielectric, and $E_1(max)$ is a maximum value [V/m] of the electric field at the end surface of the electrode.

2. (original) The plasma generator according to claim 1, wherein the corresponding end edge of the second electrade is formed by a rear end edge of the second electrode.

3. (original) The plasma generator according to claim 1, wherein the corresponding end edge of the second electrade is formed by a front end edge of the second electrode.

4. (currently amended) The plasma generator according to ~~any one of claims 1 to 3~~ claim 1, wherein the angle θ_2 formed by the imaginary plane with the thickness-wise direction of the dielectric is at least 45°.

5. (currently amended) The plasma generator according to ~~any one of claims 1 to 3~~ claim 1, wherein a ratio (Ll/d) of the separate distance L1 to the thickness d of the dielectric is 1 to 3.

6. (original) The plasma generator according to claim 4, wherein a ratio (Ll/d) of the separate distance Ll to the thickness d of the dielectric is 1 to 3.

7. (currently amended) The plasma generator according to ~~any one of claims 1 to 3~~ claim 1, wherein the voltage applied between the first and second electrodes is 2.5 to 3.5 kV.

8. (original) The plasma generator according to claim 4, wherein the voltage applied between the first and second electrodes is 2.5 to 3.5 kV.

9. (original) The plasma generator according to claim 5, wherein the voltage applied between the first and second electrodes is 2.5 to 3.5 kV.

10. (original) The plasma generator according to claim 6, wherein the voltage applied between the first and second electrodes is 2.5 to 3.5 kV.

11. (original) A plasma generator which is provided with a plasma forming space, into which the air is introduced, and has, in the plasma forming space, an electrode arrangement structure that band plate-like first and second electrodes are arranged in spaced relation from each other in the same plane in the sectional thickness of the dielectric, and the following Equation 4 is satisfied:

(Equation 4)

$$26 \times 10^{6}[V/m] \geqq \frac{V}{L2}$$

wherein L2 is a separate distance [m] between the first electrode and the second electrode, and V is voltage [V] applied between the first and second electrodes.

12. (original) A plasma generator which is provided with a plasma forming space, into which the air is introduced, and has, in the plasma forming space, an electrode arrangement structure that band plate-like first and second electrodes are arranged in spaced relation from each other are formed on a surface of the dielectric, a surface of at least either one of the first and second electrodes being coated with a dielectric film,

and the following Equation 4 is satisfied:

(Equation 4)

wherein L2 is a separate distance [m] between the first electrode and the second electrode, and V is voltage [V] applied between the first and second electrodes.

13. (currently amended) The plasma generator according to claim 11 ~~or 12~~, wherein the voltage applied between the first and second electrodes is 2.5 to 3.5 Kv.

14. **(new)** The plasma generator according to claim 2, wherein the angle θ_2 formed by the imaginary plane with the thickness-wise direction of the dielectric is at least 45°.

15. **(new)** The plasma generator according to claim 3, wherein the angle θ_2 formed by the imaginary plane with the thickness-wise direction of the dielectric is at least 45°.

16. **(new)** The plasma generator according to claim 2, wherein a ratio (Ll/d) of the separate distance L1 to the thickness d of the dielectric is 1 to 3.

17. **(new)** The plasma generator according to claim 3, wherein a ratio (L1/d) of the separate distance L1 to the thickness d of the dielectric is 1 to 3.

18. **(new)** The plasma generator according to claim 2, wherein the voltage applied between the first and second electrodes is 2.5 to 3.5 kV.

19. **(new)** The plasma generator according to claim 3, wherein the voltage applied between the first and second electrodes is 2.5 to 3.5 kV.

20. **(new)** The plasma generator according to claim 12, wherein the voltage applied between the first and second electrodes is 2.5 to 3.5 Kv.